

REMARKS

The Examiner is thanked for the due consideration given the application.

Claims 1-3, 5-6, 8-16 and 19-24 are pending in the application. Claim 7 is canceled by this amendment. Claims 22-24 are newly presented. Support for the amended claim set can be found in the specification at paragraphs 0038 and 0047 and in Figures 22 and 23.

No new matter is believed to be added to the application by this amendment.

Rejections Based on FUJITA et al.

Claims 1-3 and 21 have been rejected under 35 USC §103(a) as being unpatentable over FUJITA et al. (U.S. Publication 2005/0058880). Claims 1-3, 5-7, 10-16, 19 and 20 have been rejected under 35 USC §103(a) as being unpatentable over FUJITA et al. in view of BECERRA et al. (U.S. Patent 7,270,907), PRASED et al. (U.S. Patent Publication 2003/0138679), BULLOCK et al. (U.S. Patent Publication 2003/0207158) or DEVOS et al. (U.S. Patent Publication 2005/0079128 A1). These rejections are respectfully traversed.

The present invention pertains to a removably mountable fuel cartridge for a fuel cell that is illustrated, by way of example, in Figures 1 and 2 of the application, which are reproduced below.

Fig. 1

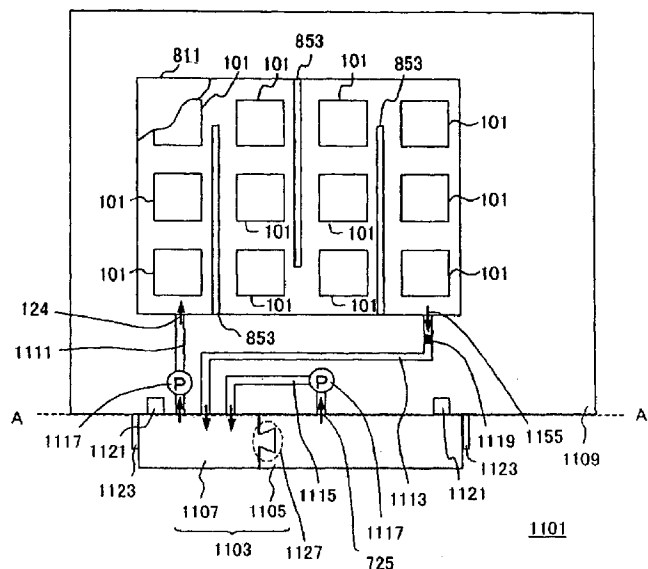
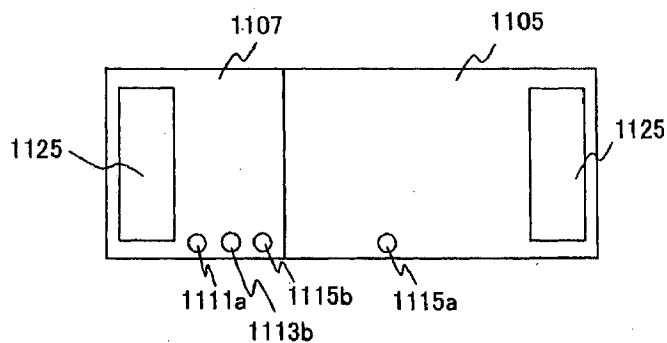


Fig. 2



Figures 1 and 2 of the application show a removably mountable fuel cartridge 1103 that includes a high-concentration fuel tank 1105 (first chamber) and a low-concentration fuel tank 1107 (second chamber). The present invention supplies a high concentration fuel in the first chamber to a fuel cell through a low concentration fuel tank (second chamber).

The high-concentration fuel tank and the low-concentration fuel tank can be interconnected such that they can be removed or remounted while linked. Amended claim 1 of the

present invention now recites: "said first chamber and said second chamber are detachably connected at a fitting section such that said fuel cartridge is removably mountable to said fuel cell body while said first chamber and said second chamber are linked."

The fuel cell geometry that allows this interlinked detachability is exemplarily shown in Figures 22 and 23 of the application, which are reproduced below.

Fig. 22

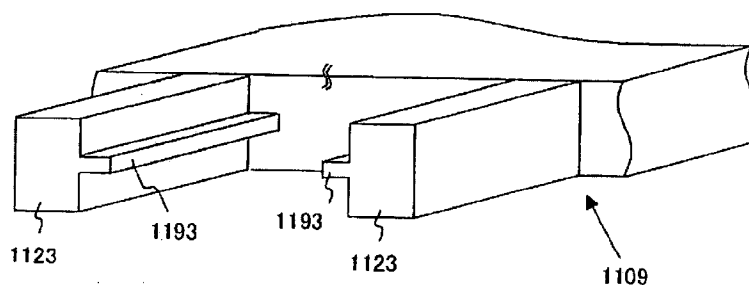
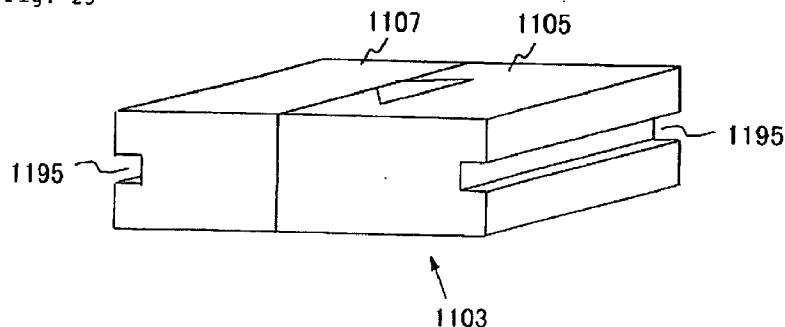


Fig. 23



This geometry is detailed in new claims 22-24.

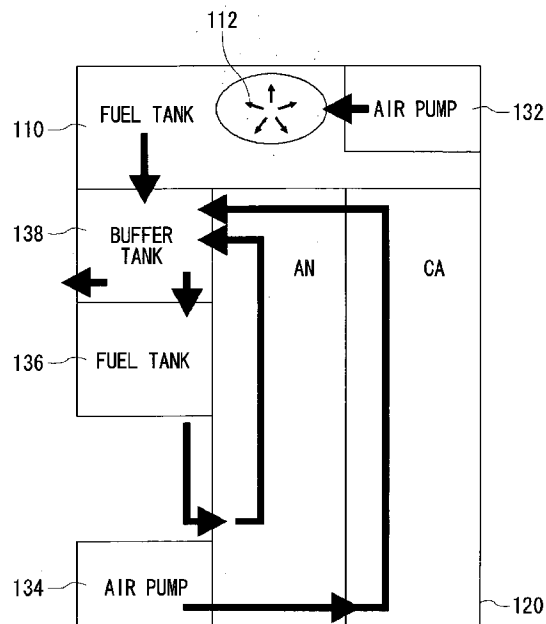
In more detail, FUJITA et al. disclose a fuel tank and a buffer tank, and the buffer tank receives generated water and unreacted fuel from the air electrode. On the other hand, there

is no recovery channel from the air electrode in the present invention.

Also, the buffer tank of FUJITA et al. does not preliminarily contain the low-concentration fuel.

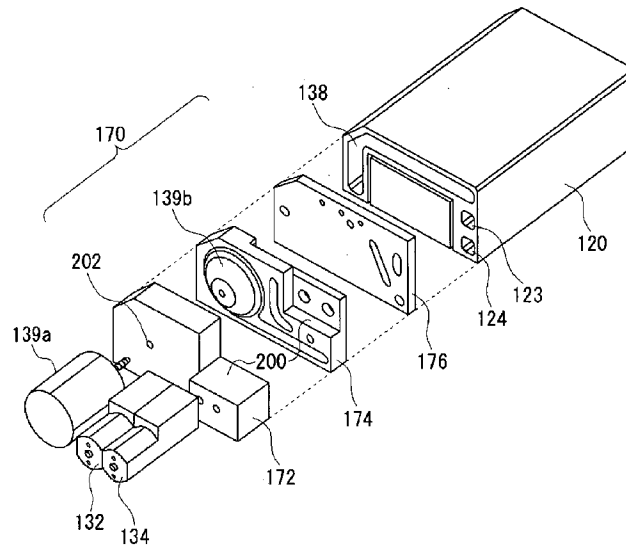
FUJITA et al. pertain to a compact fuel cell apparatus suitable for attaching to a portable computer. The basic flow of the fuel cell of FUJITA et al. is shown in Figure 1 of the publication, which is reproduced below.

FIG.1



The Official Action refers to Figures 9-13 of FUJITA et al. The cell geometry is typified in Figure 9, which is reproduced below.

FIG.9



As can be seen, the buffer tank 138 (which is used for mixing) is integrated with the fuel cell 120. The forced air used to pump the fuel is supplied using a motor 139a and a fan 139b in a sealed fuel cell assembly.

There is thus no way that FUJITA et al. can be construed as teaching a configuration where low and high concentration fuel tanks can form a removably mountable fuel cartridge. Instead, Figures 17A and 17B of FUJITA et al. show a single removable fuel tank.

That is, FUJITA et al. do not provide a technology where in an **initial state**, a mixing tank is filled with low-concentration fuel and a high-concentration fuel tank is filled with high-concentration fuel at a higher concentration of fuel component than the liquid in the mixing tank. See paragraph 0038 of the specification.

FUJITA et al. thus fail to infer a claimed embodiment of the present invention to one of ordinary skill and creativity, and a *prima facie* case of unpatentability has thus not been made.

The secondary references fail to address the deficiencies of FUJITA et al.

For example, Figure 12 of BECERRA et al., which is reproduced below, shows a fundamentally different type of fuel flow.

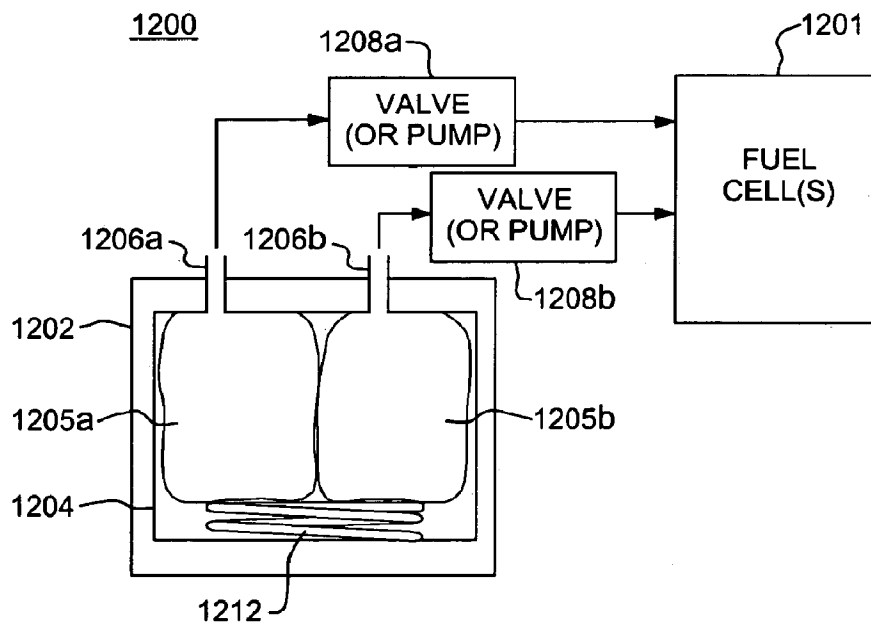


FIG. 12

Figure 12 of BECERRA et al. shows two kinds of fuel whose concentrations are different from each other.

That is, Figure 12 of BECERRA et al. shows a fuel cell 1201, and a container 1204 that encloses dual fuel bladders 1205a and 1205b. Column 9, lines 41-46 of BECERRA et al. states: "*More specifically, a high methanol concentration fuel may be delivered*

from container 1205a, via fuel outlet 1206a, through an optional pump 1208a. A lower methanol concentration fuel may be delivered from container 1205b, via the fuel outlet 1206b, through an optional pump 1208b." Column 9, lines 46-48 of BECERRA et al. then states: *"The fuel concentration can be controlled by switching between high and lower concentration fuels."* Figure 12 of BECERRA et al. thus shows a technology where both low concentration fuel and high concentration fuel are fed directly to the fuel cell. This requires a circulation mechanism, which is not necessary in the present invention.

One of ordinary skill and creativity would thus not produce a claimed embodiment of the present invention from a knowledge of the applied art references, and a *prima facie* case of unpatentability has thus not been made.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

The Examiner is thanked for considering the Information Disclosure Statement filed November 1, 2007 and for making an initialed PTO-1449 Form of record in the application.

Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

The rejections are believed to have been overcome, obviated or rendered moot and that no issues remain. The Examiner is accordingly respectfully requested to place the

application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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